

PEM: HRI

KITASS

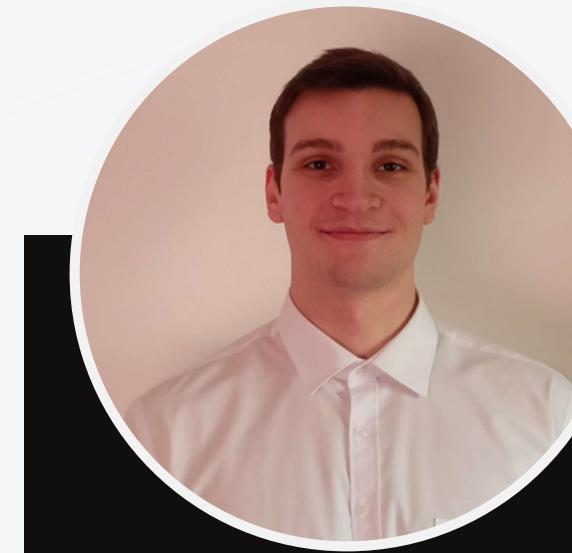
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OUR TEAM



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Voice-controlled addition of the desired spices in the requested amounts

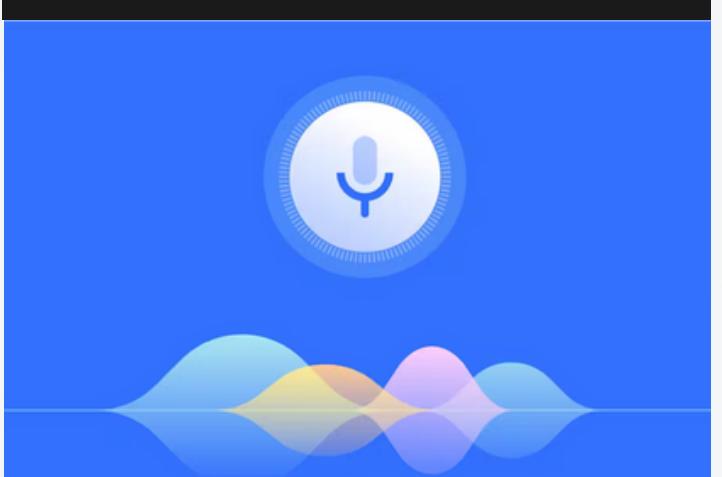


- Easy and precise regulation of the amount
- No need to interrupt the current activity
- Flexible due to the modular structure
- Accessible for ease of use



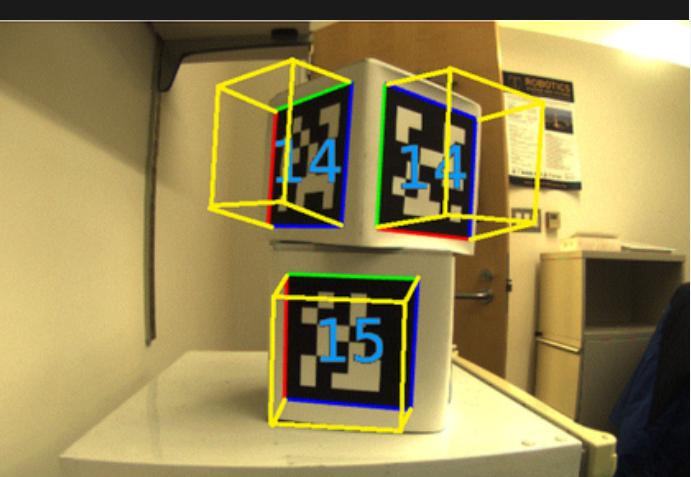
FEATURES

Voice Assistant



- Giving voice input "Spice Type" & "Amount"
- Voice feedback
- Human-like interaction

Object Detection



- Detect the spice via dynamic locations with AprilTag
- Calculating Distance

Scale



- Providing the best taste and nutritional values
- Ensuring precise spice amount by delivering real-time scale feedback

Dynamical movement



- Picking up the spice
- Putting it back to its original location

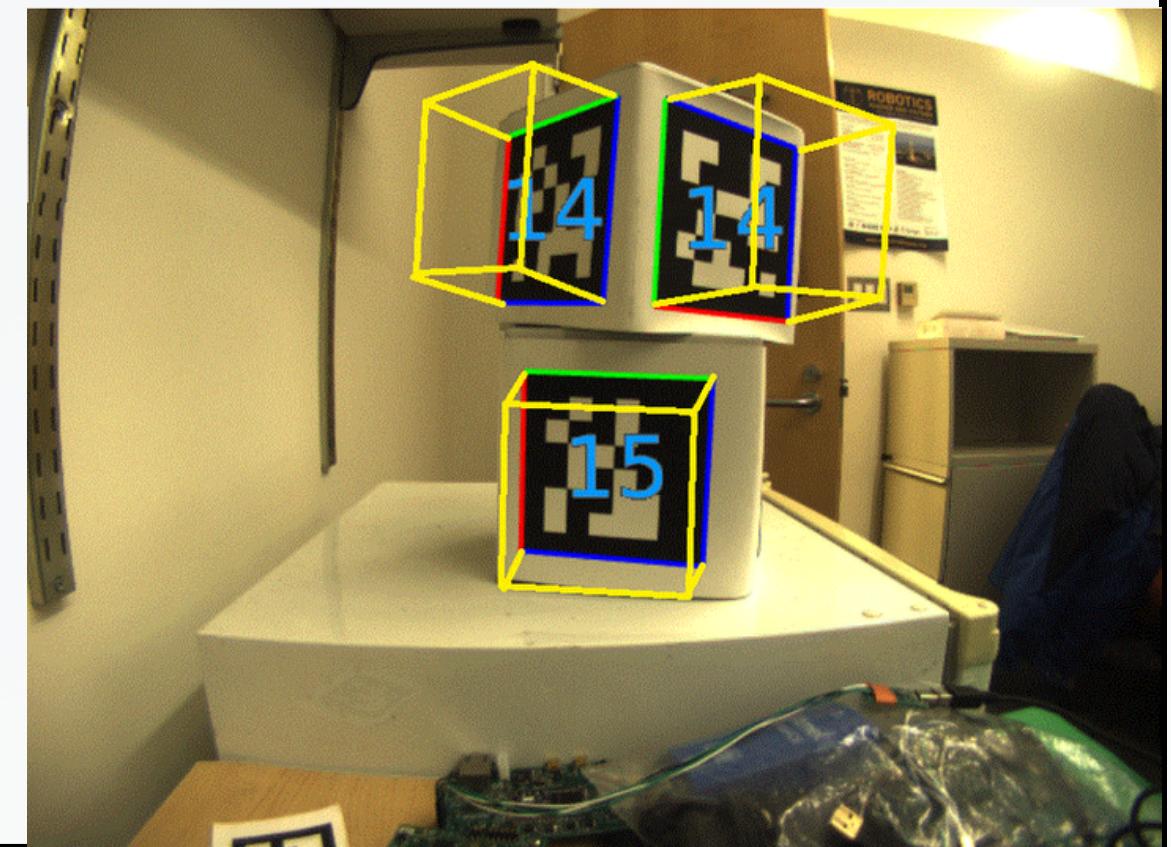
VOICE ASSISTANT

- Giving voice input "Spice Type" & "Amount"
- Voice feedback
- Human-like interaction



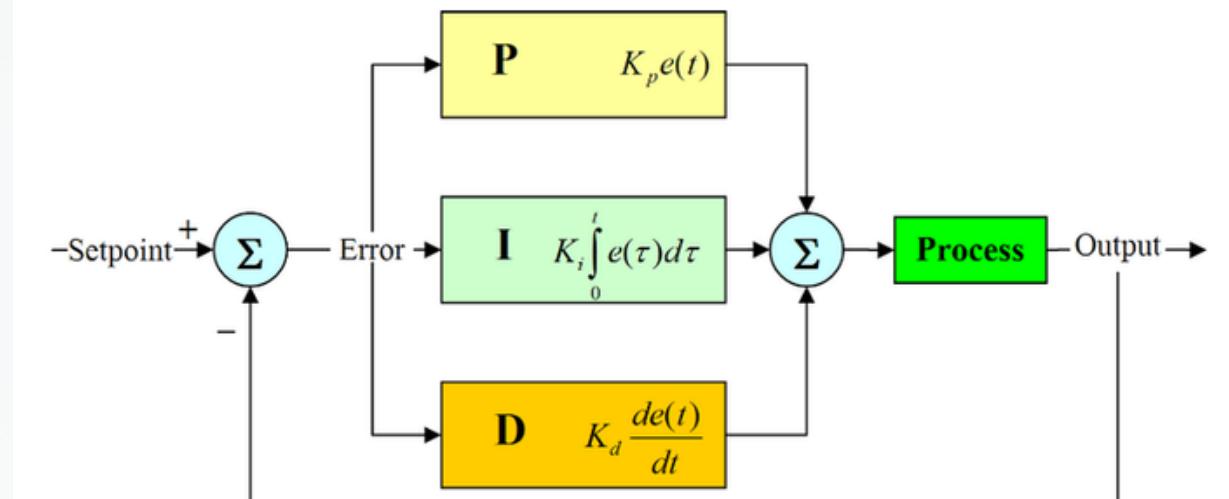
OBJECT DETECTION

- Detect the spice via dynamic locations with AprilTag
- Calculating Distance



SCALE

- Providing the best taste and nutritional values
- Ensuring precise spice amount by delivering real-time scale feedback



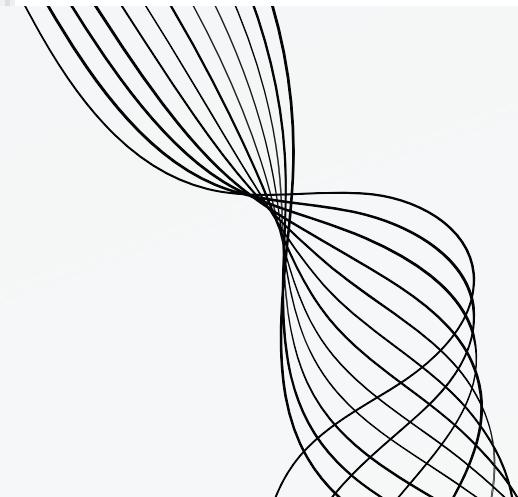
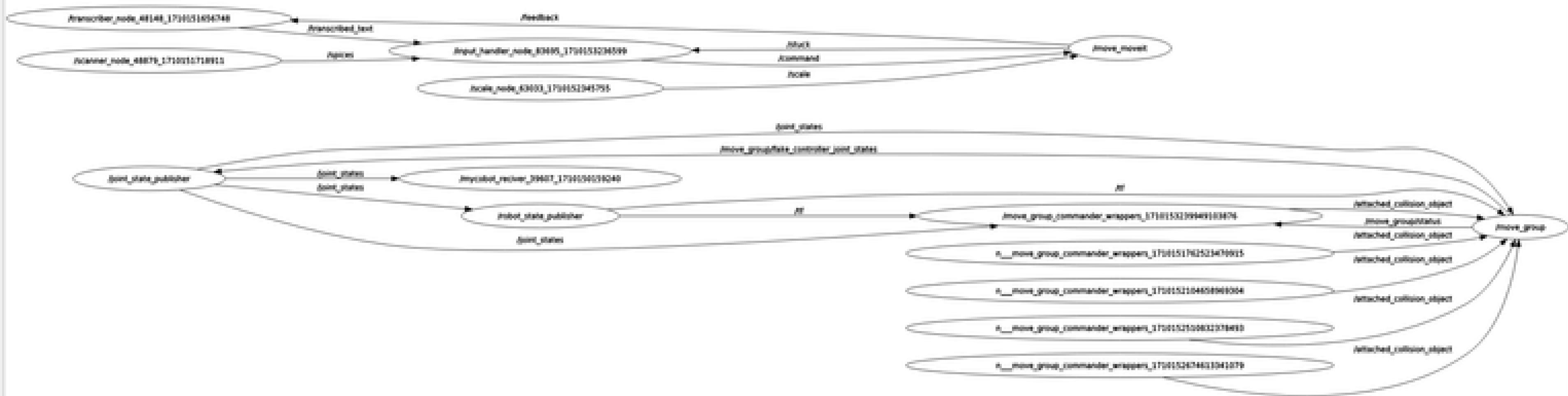
DYNAMICAL MOVEMENT

- Picking up the spice
- Putting it back to its original location
- Pymycobot
- Move It
- Constraints



 **MoveIt**
 **ROS**

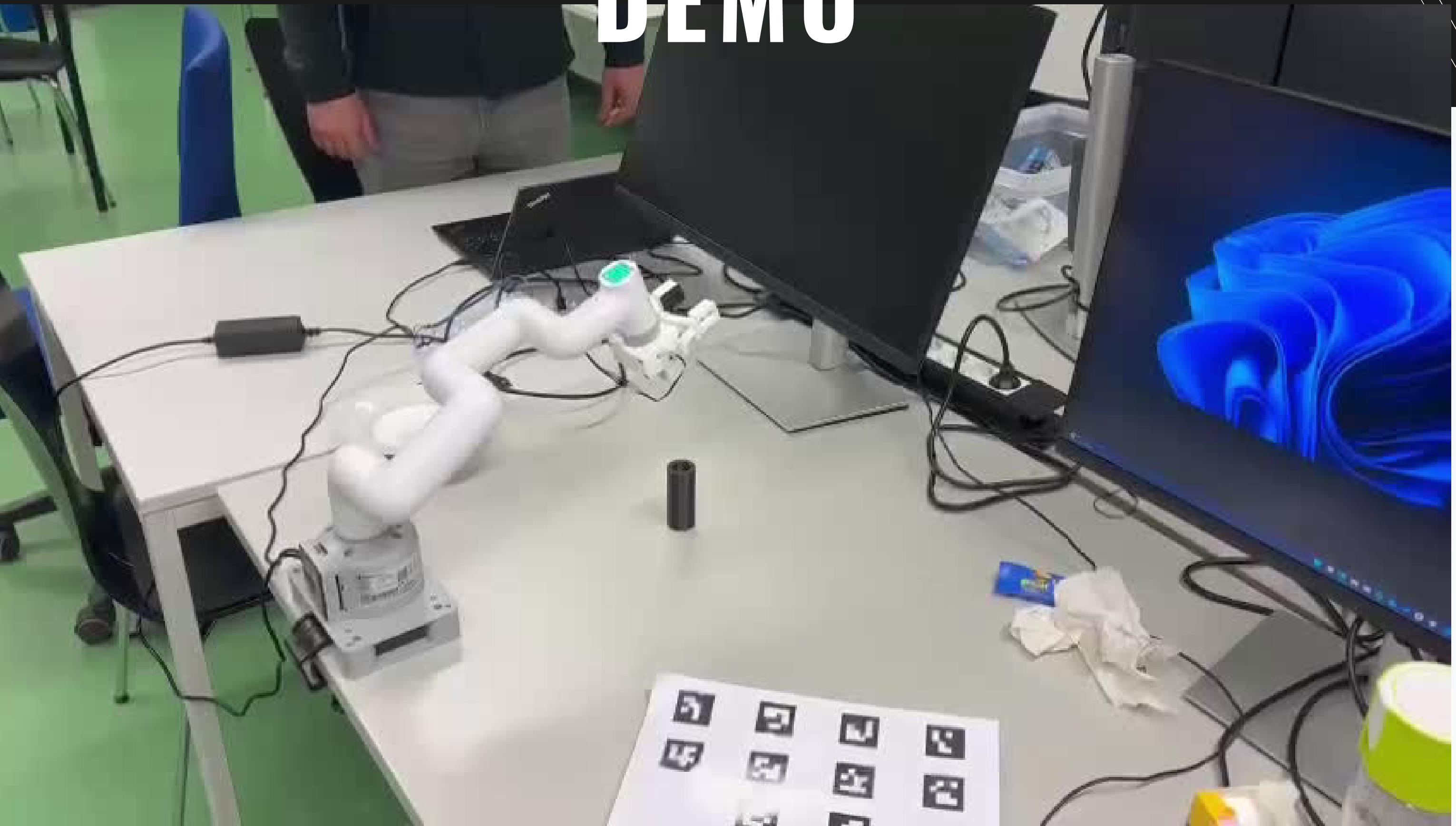
NODES



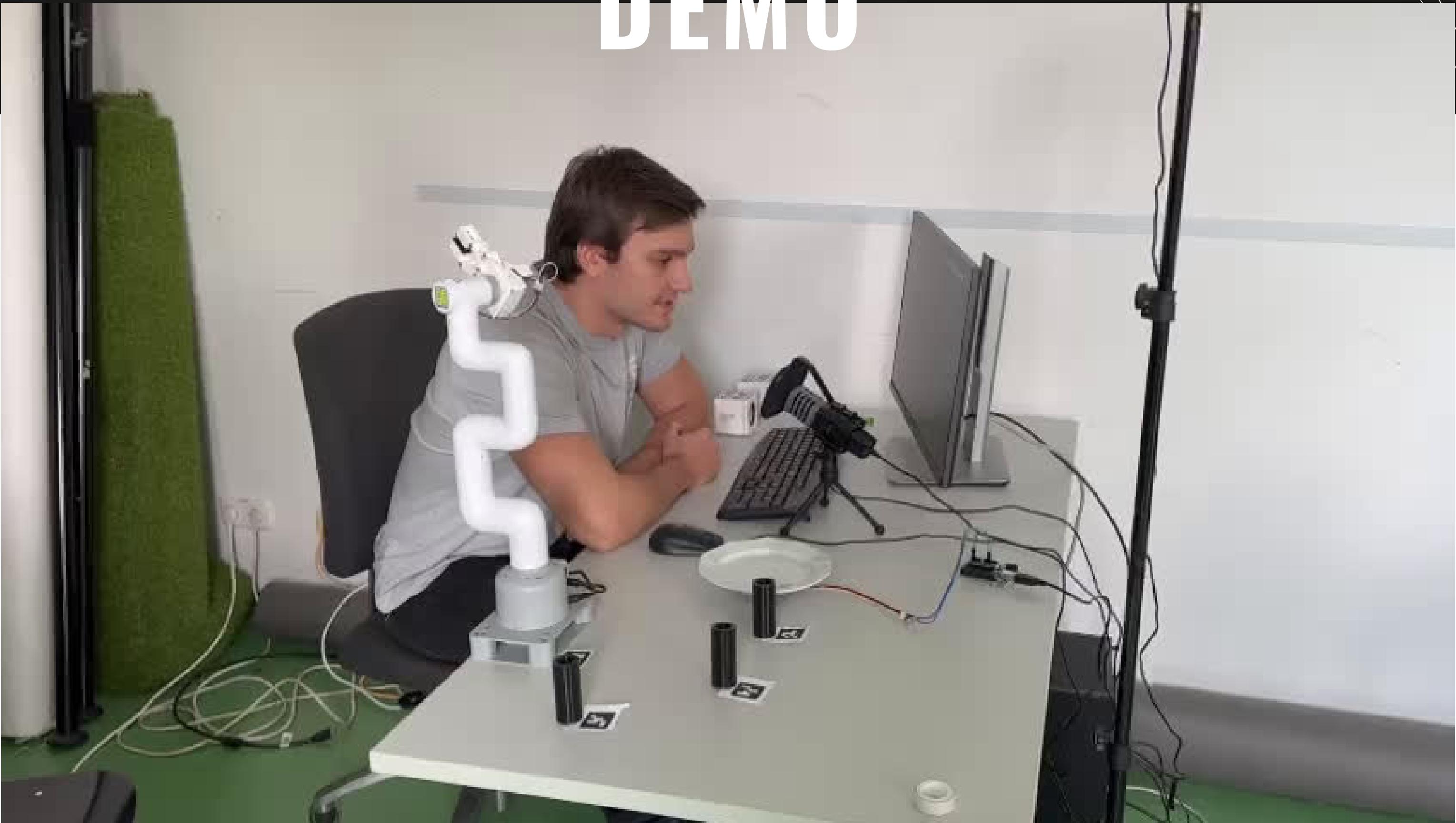
LESSONS LEARNED

- Problems with different sensors and the robot
- Movement of the Robot with Movelt and Constraints
- Many components require extensive tuning

DEMO



DEMO



**THANK'S FOR
WATCHING**

